



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/363,868	07/29/1999	MICHIAKI SAKAMOTO	12873	8658
23389	7590	09/08/2004		
SCULLY SCOTT MURPHY & PRESSER, PC 400 GARDEN CITY PLAZA GARDEN CITY, NY 11530			EXAMINER NGUYEN, DUNG T	
			ART UNIT 2871	PAPER NUMBER

DATE MAILED: 09/08/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 09/363,868	Applicant(s) SAKAMOTO, MICHIAKI	
	Examiner Dung Nguyen	Art Unit 2871	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 03 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on RCE 07/12/2004.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-10, 19-22 and 40-47 is/are pending in the application.
- 4a) Of the above claim(s) 5 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-4, 6-10, 19-22, 40-47 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 07/12/2004 has been entered.
2. Applicants' amendment dated 07/12/2004 has been received and entered. By the amendment, claims 1-4, 6-10, 19-22 and newly added claims 40-47 are now pending in the application.

Claim Rejections - 35 USC § 103

3. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.
4. Claims 1-4, 6-9 and 40-47 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shimada et al., US Patent No. 5,852,485, in view of Kondo et al., US Patent No. 6,198,520.

Regarding the above claims, Shimada et al. disclose an in-plane switching (IPS) liquid crystal display (LCD) device having:

- a pair of substrate (21, 212);
- a liquid crystal layer (217) formed therebetween;
- a thin film transistor (TFT);
- a gate insulation film (23);

Art Unit: 2871

a color filter (218);

an overcoat layer (29) formed over the color filter (218);

a common electrode (213) and a pixel electrode disposed between the color filter and the liquid crystal layer, wherein the common electrode form over the TFT are and also serve as a black matrix.

Shimada et al. do not disclose a protection film over the gate insulation film and an inter-layer insulating film forming between the pixel electrode, the common electrode (e.g., inter-layer film formed on the common electrode, and the pixel electrode is formed on the inter-layer film). Kondo et al. do disclose an IPS LCD device in which a color filter (5) can be formed over a protection film (insulating layer 24) as well as an insulating film (4) formed over a common electrode (2) and a pixel electrode (3) formed over the insulating film (see figure 8). Therefore, it would have been obvious to one skilled in the art at the time of the invention was made to modify the Shimada et al. device having a color filter over a protection film as well as a pixel electrode formed over a common electrode with an insulating film therebetween as shown by Kondo et al. in order to improve a display characteristic and to avoid cross-talk between a pixel electrode and a common electrode. Furthermore, Kondo et al. also disclose the IPS LCD having a light shielding (black matrix 14) formed above a TFT (21) in order to protect such TFT underneath from light.

5. Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over Shimada et al., US Patent No. 5,852,485, in view of Kondo et al., US Patent No. 6,198,520, further in view of Kim et al., US Patent No. 6,469,764.

Regarding claim 10, the modification to Shimada et al. disclose the claimed invention as described above except for liquid crystal is orientated substantially vertically to the substrate. Kim et al. do disclose a homeotropic alignment can be formed in an IPS LCD device (see abstract). Therefore, it would have been obvious to one skilled in the art to employ a homeotropic alignment in the Shimada et al. device in order to improve a picture quality in an LCD device (col. 3, ln. 44).

6. Claims 19-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shimada et al., US Patent No. 5,852,485 , in view of Kondo et al., US Patent No. 6,198,520, further in view of Kim et al., US Patent No. 6,469,764, Xu et al., US Patent No. 6,023,317 and Ishikawa et al., US Patent No. 5,677,747.

Regarding the above claims, the modification to the Shimada et al. disclose the claimed invention as described above except for a compensation film disposed between the pair of substrate and polarizing plate. Xu et al. do disclose in figures 1-3 that an optical compensation film (e.g, positive or negative) can be disposed between a substrate and a polarizing film. In addition, Ishikawa et al. disclose a pretilt angle formed by rubbing in which liquid crystal molecules will be felled when applying a voltage (figs. 3-4). Therefore, it would have been obvious to one skilled in the art to employ the optical compensation film in the Shimada et al. device in order to improve viewing characteristics (see abstract).

7. Claim 22 is rejected under 35 U.S.C. 103(a) as being unpatentable over Shimada et al., US Patent No. 5,852,485 , in view of Kondo et al., US Patent No. 6,198,520, further in view of Kim et al., US Patent No. 6,469,764 and Murai et al., US Patent No. 6,160,604.

Art Unit: 2871

The modification to Shimada et al. discloses the claimed invention as described above except for an organic based material for the liquid crystal layer. Murai et al. do disclose a liquid crystal material can be added an organic material and injected to the gap between two substrates (col. 7, ln. 26) for forming a liquid crystal layer. Therefore, it would have been obvious to one skilled in the art to add monomer or oligomers into a liquid crystal material as shown by Murai et al. in order to stabilize the rising directions of the liquid crystal molecules (col. 7, lines 27-32).

Response to Arguments

8. Applicant's arguments filed 07/12/2004 have been fully considered but they are not persuasive as follow:

Regarding claim 1, Applicants contend that neither Shimada nor Kondo, taken alone or in any combination, teaches or suggests a gate insulation film on a first substrate, a protection film disposed on the gate insulation film or plural TFTs, a color layer disposed on the protection film, and an interlayer separation film dispose above the color filter layer (amendment, pages 12-13). The Examiner respectfully disagree with the Applicants' view-point since the modification to Shimada et al. would employ a protection layer (4) which is formed below a color filter (5) as shown by Kondo which together formed over a gate insulating (Shimada et al. gate insulating 23) as well as an interlayer separation film (insulating layer 4 between pixel electrode 3 and common electrode 2) as stated above.

Regarding claims 2-4, 6-10, 19-21 and 22, those claims, either directly or indirectly, depend from claim 1; therefore, such modification to Shimada et al. would have been obvious as stated above.

Accordingly, the rejection of the above claims stand.

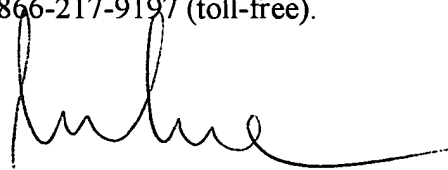
Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dung Nguyen whose telephone number is 571-272-2297. The examiner can normally be reached on Monday-Thursday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert H. Kim can be reached on 571-272-2293. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

DN
09/07/2004



***Dung Nguyen
Primary Examiner
Art Unit 2871***